To help EPA consider potential risks to the ecosystem and humans we will need some answers to the following questions:

How is the product applied? To water, to marshland, both?
The shredded mulch will be applied onto marsh shorelines using blowers, much like insulation is blown into attics. The blowers will be positioned on air boats, so workers do not have to step onto the fragile marsh tidal areas or into oil. The bagasse material will not be applied to open water, just onto oiled marsh grasses and soils typically within 4ft of the marsh edge.

How quickly is the bagasse recollected for transport to a waste facility?
NRCS recommends that we not collect the oiled bagasse material, because collecting the material in the highly delicate marsh environment could actually cause more harm to the soils and vegetation than leaving the sorbent materials in place. The sorbent will be left in place to accelerate natural attenuation of the oil with minimal damage to the grasses and to prevent the oil from going down into the roots/rhizomes. Within one to two months, the natural biodegradation processes will assimilate the sorbent material into the marsh.

How much bagasse (in units of mass) is going to be applied so we can calculate the total pesticide load?
The amount of sorbent material will depend on the degree of oil impairment of the marsh vegetation. However, we recommend applying the sorbent material on the oil area to a depth of about two inches and a width of about four feet from the shoreline into the interior of the marsh area. The application sites will be monitored on a daily basis to determine whether additional sorbent needs to be applied; if the applied sorbents are saturated with oil, NRCS recommends applying additional material on top to increase the absorption capabilities to the site.

The bulk density of bagasse is approximately 0.11 g/cm-3 (Breitenbeck G.A. and B. Grace, 2002).

What is USDA's estimate of the volume of water that would be immediately associated with the application of the bagasse?
The bagasse sorbent material will be applied in a dry state onto the marsh vegetation and soil. These areas have varying degrees of tidal flux (on average about 12 inches of tidal influence), so it is difficult to estimate the volume of water that will interact with the sorbent. The sorbent will not, however, be applied to open water; instead, it will be applied to the marsh shorelines. Furthermore, once bagasse is mulched it is dense and stable – once applied to the marsh shoreline we anticipate that sorbent material will not significantly move or be transported by wave or tidal action.

How is the bagasses deployed? Is there human contact with the material?
If so, how much material would an applicator handle? How would any human/applicator contract be similar or different from routine handling of bagasse (harvest, at sugar processing, post-processing)?

The preferred method will be blow the bagasse onto the application area, similar to blowing insulation into a house attic. At the mill, the bagasse is handled by large machinery and conveyors. Heavy loaders will then load the bulk bagasse onto barges that will carry the sorbent to the project site. This heavier shredding equipment will not be used in the marsh. In the marsh environment, workers will have to conduct some hand transfer of the bagasse from the barges onto the airboats and to the smaller blower equipment. Blowers will be used to apply the sorbent onto the marsh shorelines. Additional protective equipment and procedures for the sorbent material handling and application will be developed if recommended.

How is the bagasse recollected? Mechanically or by hand? How much bagasses will a person be in contact if collected by hand? If collected by hand what PPE will already be required given the oil that will be absorbed in the material?
NRCS recommends that the bagasse not be recollected. Due to the fragile nature of the marshes, we instead recommend leaving the sorbents in place to attenuate the oil in the soil and on the marsh vegetation. Within one to two months, natural biodegradation processes will assimilate the sorbent materials into the marsh.

What are the uses of bagasse and of those uses approximately what percentages?
Bagasse is a by-product of the extraction of sugar from sugarcane. We do not have an estimate of percentages, but some mills burn this material in their furnaces; a few use it as biomass for ethanol production; while others donate to sharecroppers to apply to fields as organic mulch.

Would appreciate your answers ASAP this afternoon so we can provide our assessment before the pilot tomorrow.
Today's demonstration is not an official pilot test of the bagasse sorbent practice. It is, instead, a demonstration of how the equipment and application will work from airboats along a shoreline area. The demonstration will occur in a clean area that has not been oiled and on private land with a landowner who has consented with this test. The overall application test will be less than an acre in size. We understand that Regional Response Team VI is conducting a more formal pilot of the application later this week.